APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/415,815	10/12/1999	KLAUS-PETER LINDNER	9090-0149	5340

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BOSE MCKINNEY & EVANS LLP
135 N PENNSYLVANIA ST
SUITE 2700
INDIANAPOLIS, IN 46204

EXAMINER
GARCIA OTERO, EDUARDO

ART UNIT	PAPER NUMBER
2123	

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

	Application No.	Applicant(s)
Office Action Summary	09/415,815	LINDNER ET AL.
	Examiner	Art Unit
	Eduardo Garcia-Otero	2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _22 May 2003_ .

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-6,8-18 and 24-37_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-6,8-18 and 24-37_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☒ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)	4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) ☐ Notice of Informal Patent Application (PTO-152)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .	6) ☐ Other: .

DETAILED ACTION-Final

Introduction

1. Title is: APPARATUS FOR USE IN AN INDUSTRIAL PROCESS AND PLANT INCLUDING SUCH APPARATUSES AS WELL AS METHOD FOR SIMULATING OPERATION OF SUCH A PLANT

2. First joint inventor is: LINDNER

3. Applicant's Amendment was received 5/22/03. The amendments are accepted without objection.

4. Claims 7 and 19-23 are cancelled.

5. Claims 1-6, 8-18, and 24-37 have been submitted, examined, and rejected.

6. This is the third action on the merits, and is Final.

7. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d) to 10/29/98.

8. The drawings are informal due to the Draftperson's prior objections.

9. The Examiner will refer to the claims using the following unique and clear parenthetical expressions: Claim 1-2 (amended), 3-5 (twice amended), 6 (original), 8-9 (twice amended), 10 (amended), 11 (twice amended), 12-18 (amended), 24-37 (amended). See MPEP 714 [R-1] and 37 CFR 1.121(c)(1)(i).

Index

10. **McClanahan** refers to McClanahan et al., US Patent 4,613,952

11. **Banks** refers to Handbook of Simulation: Principles, Methodology, Advances, Applications, and Practice, by Jerry Banks (Editor), John Wiley & Sons, Inc., ISBN: 0-471-13403-1, August 1998.

12. **Tucker** refers to The Computer Science and Engineering Handbook, by Allen B. Tucker, Jr. (Editor-in-chief), CRC Press, ISBN: 0-8493-2909-4, 1996.

13. **Tabak** refers to Advanced Microprocessors, by Daniel Tabak, McGraw-Hill, Inc., ISBN 0-07-062843-2, 1995.

14. **Head** refers to Claude D. Head, III, US Patent 6,076,652.

15. **Webster** refers to Webster's Third New International Dictionary, Merriam-Webster Inc, copyright 1993.

16. **Microsoft Computer Dictionary** refers to Microsoft Computer Dictionary, Fourth Edition, by Microsoft Press, JoAnne Woodcock as Senior Contributor, ISBN 0-7356-0615-3, May 1999.

Applicant's Remarks

17. FIRST NAMED INVENTOR. Remarks page 8. Applicant acknowledges and agrees that Lindner is the first named joint inventor. The objection to the declarations is withdrawn.

18. DRAWINGS. Remarks page 8. Applicant persuasively distinguishes between "measuring apparatus 26" in FIG 2 (see specification Page 4) and "measuring apparatus 42" in FIG 3 (see Specification Page 5). Element 42 is a particular example of element 26. The prior objection is withdrawn.

19. SPECIFICATION. Remarks page 8. Applicant has amended the specification, the prior objection is withdrawn.

20. CLAIM 1 (AMENDED), SEQUENCE PROGRAMS. Remarks page 10. Applicant cites the specification regarding the terms "process sequences" and "total sequence" and "programs and/or sequence definitions". Applicant then states that "sequence programs" are related to the stages of operation of the measuring apparatus, and are then needed to provide a complete specification of the measuring apparatus in order to simulate the behavior of the measuring apparatus in operation". The prior 35 USC 112 first paragraph rejections are withdrawn.

21. CLAIM 1 (AMENDED), COMPREHENSIVE MIMIC IMAGE. Remarks page 9-10. Applicant states "an important feature of the claimed software apparatus model is that it contains **all** information relevant to the apparatus; in other words, it contains a comprehensive mimic image of the apparatus... the software model contains a **complete representation** of the apparatus." Emphasis in original.

22. Applicant distinguishes said model from prior art apparatus specifications which are "**incomplete** and not suitable to provide the central control unit with a **comprehensive mimic image**". Specifically, Applicant states that incomplete

specifications "do not allow the apparatus to be tested without it actually being on-line".

23. Specification page 2 paragraph 2 states "software apparatus model is memorized which contains a comprehensive mimic image of the apparatus including its parameters, functionality and sequence programs". Specification page 2 paragraph 3 states "apparatus models... simulated for testing it in including all parameters and functionalities contained in the apparatus models."

24. In conclusion, a "comprehensive mimic image" appears to be a software model including parameters, functionalities, and sequence programs.

25. The Applicant persuasively emphasizes that "comprehensive mimic image" may include other information, but does not give any indication what type of other information is contemplated. The prior 35 USC 112 first paragraph rejections are withdrawn.

26. CLAIM 5 (TWICE AMENDED), LOW LEVEL AND HIGH LEVEL. Remarks page 11. Applicant states that the software program may be either high level or low level. The prior 35 USC 112 first paragraph rejections are withdrawn.

27. CLAIM 8 (TWICE AMENDED), DATA CARRIER. Remarks page 11. Applicant states "data carrier" is something on which an apparatus model can be memorized, and cites the specification "memorize these apparatus models on data carriers which are loaded into the central control unit 18 from the data carrier". Applicant states "can be used to load an apparatus model into the central control unit 18, instead of, for example, storing the apparatus model in the corresponding apparatus". The Examiner interprets "data carrier" as "data memory or storage".

28. Thus, "data carrier" is not a bus, but rather appears to be some type of data memory or storage device such as a floppy disk, or a hard drive, which can store the apparatus model and can load the model into the central control unit. The prior 35 USC 112 first paragraph rejections are withdrawn.

29. CLAIM 8 (TWICE AMENDED), DATA CARRIER, REPUGNANT TERMINOLOGY. Note that the term "carrier" is defined by Microsoft Dictionary as "In communications, a specified frequency that can be modulated to convey

information." The difficulty with Applicant's terminology is that frequency carriers contain information only in a transient sense, they do not store data in a permanent sense. Thus, the Examiner objects to Applicant's "data carrier" term in claim 8 as repugnant.

30. REJECTIONS UNDER 35 USC 103. Remarks page 13-15. The Examiner will address Applicant's remarks below *(in italics)*, in the context of the relevant rejections.

35 USC § 112-first paragraph (Enablement), and second (Indefinite)-WITHDRAWN

31. All prior 35 USC 112 first paragraphs are withdrawn due to Applicant's persuasive assertions, or due to the amendment of claims 2 and 3.

Claim Interpretation

32. **The claim language is interpreted in light of the specification.** Limitations from the specification must not be imported into the claims, but definitions from the specification must be imported into the claims.

33. **In Claim 1,** the term **"comprehensive mimic image"** is interpreted as a software model which includes parameters, functions, and sequence information.

34. **In Claim 8 (amended),** "apparatus model…is **memorizable on a data carrier**" is interpreted as "apparatus model… is stored on "data memory or storage".

Claim Rejections - 35 USC § 103

35. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action: (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

36. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows: 1. Determining the scope and contents of the prior art. 2. Ascertaining the differences between the prior art and the claims at issue. 3. Resolving the level of ordinary skill in the pertinent art. 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

37. **Claims 1-2 (amended), 3-5 (twice amended), 6 (original), 8-9 (twice amended), 10 (amended), 11 (twice amended), 12-18 (amended), 24-37 (amended) are rejected under 35 U.S.C. 103(a) as being unpatentable.**

38. <u>**Claim 1 (amended) is rejected**</u> under 35 U.S.C. 103(a) as being unpatentable over Banks in view of Tabak and Tucker.

39. Claim 1 is an independent claim with 7 limitations, labeled A-G by the Examiner for clarity.

40. **A-"An apparatus"** is disclosed by Banks at Page 524 "Resources are used to manufacture products. **Resources include machines** and human beings as well as tools, fixtures, material handling systems, storage areas and so on".

41. **B-"a software apparatus model"** is disclosed by Banks at Page 6 "A model is a representation of an actual system", and at Page 7 "A resource is an entity that provides service to dynamic entities", and at Page 397 "many existing simulation languages using object terminology", and at Page 398 "Resource objects and their behavior may be defined".

42. *Remarks page 13. Applicant unpersuasively attempts to distinguishes the claimed "apparatus model" from Bank's model. Applicant states that Banks specifically teaches away from the claimed "comprehensive mimic image" because Banks discusses the need to select limits or boundaries of a model. Bank's states "The model should be complex enough to answer the questions raised, but not too complex" at page 6 paragraph 6. The Applicant is correct that selecting the limits or boundaries of the model is essential to Banks.*

43. *Applicant, further states that "claimed software apparatus model" contains "all information relevant to the apparatus; in other words, it contains a comprehensive mimic image of the apparatus". Note Applicant's use of the term "relevant". Applicant's term "relevant" is similar to Bank's term "complex enough to answer the questions raised, but not too complex".*

44. *For example, much of the data regarding an apparatus may be irrelevant to the software model. For example, the color of a valve, the weight of a valve, the price of a valve, the name of the manufacturer of the valve, the invoice number used to*

purchase the valve, the Federal tax classification category for depreciation, and so forth. While all of this information may be available, this information may be not "relevant", or may be too complex.

45. *Thus, Banks does <u>not</u> teach away from complex models, but rather teaches that the level of complexity should be high enough "to answer the questions raised". The Banks term "complex enough" encompasses Applicant's term "comprehensive, mimic image of the apparatus".*

46. **C-"memorized"** is interpreted as meaning that the software apparatus model is stored in memory. Storing in memory is disclosed by Banks at Page 397 "portable models". Note that models must be storable in a memory at another location in order to be portable. Additionally, note that it is inherent that a simulation model object (such as a software apparatus model) in an object-oriented simulation will be stored in memory, and that this memory will be accessed during the simulation. Note that Banks at Page 398 states "C++ is an object-oriented extension to the C programming language".

47. **E-"parameters"** is disclosed Banks at Page 398 "at the outer-level users, specific simulation models can be directly parameterized".

48. **F-"functionality"** is disclosed by Banks at Page 398 "Resource objects and their behavior may be defined".

49. Banks does not appear to expressly disclose the remaining limitations.

50. **D-**"[a software apparatus model is stored in memory, and that memory is located] **in said apparatus**" is disclosed by Tabak at page 44 "secondary memory". Tabak further states at Page 43-44 "in modern computing systems, including microprocessors, we can establish a number of distinct levels of the memory hierarchy...Fig 4.1...Secondary memory. The secondary memory is much larger than the main memory. It is used as a repository storage of information in any computing system. Magnetic disks belong to the category of secondary memory; they are very useful in information porting from system to system". Thus, storing the software model in said apparatus, and away from the central processing unit is disclosed.

51. Additionally, note that MPEP 2144.04(VI)(c) discusses rearrangement of parts. Note
that In re Japikse, 181 F2d 1019, 1023, 86 USPQ 70, 73 (CCPA 1950) states "there
would be no invention in shifting the starting switch disclosed by Cannon to a
different position since the operation of the device would not thereby be modified".
The Specification does not disclose any modification to the simulation by the "central
control unit 18" caused by storing the software apparatus model in a memory located
in said apparatus. In fact, the Specification Page 2 states that the "apparatus models
are loadable into the control unit, and that in the control unit a software program is
provided with the aid of which in using the loaded apparatus models the operation of
the plant can be simulated". This is exactly the same way that Tabak's main memory
and secondary memory operate at Tabak Page 45, "The main memory is the one
actually addressed by the CPU. It contains code and data of currently running
programs...The main memory is in general of insufficient size to contain all
information needed by the users. This is why another level of memory is
needed...Secondary memory." Thus, code and data are shifted back and forth from
the main memory to the secondary memory. The software apparatus model is data
which is accessed by the simulation.

52. *Remarks page 14. Applicant correctly quotes Tabak page 43 as stating "Five notable
levels of the memory hierarchy... that can be found on a number of recent
microprocessors, are illustrated in Fig. 4.1.". Unfortunately, this statement is
misleading if taken out of context. This statement should more clearly read "Five
notable levels of the memory hierarchy... that can be **used with** a number of recent
microprocessors, are illustrated in Fig. 4.1.". Tabak page 3 discusses modern
microprocessors that include CPU registers and caches (memory levels 0 and 1, and
possibly 2). Note that main memory and secondary memory (memory levels 3 and 4)
are not considered part of the microprocessor.*

53. *Note the discussion of secondary memory at page 45 "The secondary memory is
much large than the main memory. It is used as repository storage of information in
any computing system. Magnetic disks belong to the category of secondary memory;
they are very useful in information porting from system to system." Thus, secondary*

memory is not part of a microprocessor. Additionally, note that Tabak's term "information porting" is very similar to applicant's term "data carrier".

54. *The Examiner regrets Tabak's lack of clarity, and now includes Tabak pages 1-49 with this office action in order to provide the context for Tabak page 43. Please see the definition of microprocessor at Tabak page 1. Also see Figure 2.1 Microprocessor block diagram at page 9, which does not contain main memory or secondary memory.*

55. **G-"sequence"** is disclosed Tucker at Page 88 as "a container that stores elements in a certain linear order, which is imposed by the operations performed". Additionally, Tucker Page 88 states that a sequence is "one of four data structures...ubiquitously used in the description of discrete algorithms, and serve as building blocks for more complex data structures".

56. **At the time** the invention was made, it would have been obvious to a person of ordinary skill in the art to use Tabak and Tucker to modify Banks. One of ordinary skill in the art would have been motivated to do this because "The main memory is in general of insufficient size to contain all information by the users" according to Tabak at Page 45, and to describe "discrete algorithms" according to Tucker at Page 88. Also, note that Tabak states that secondary memory is "very useful in information porting".

57. **Claim 2 (amended) is rejected** under 35 U.S.C. 103(a) as being unpatentable over Banks in view of Tabak and Tucker.

58. Claim 2 depends from Claim 1, with 1 additional limitation.

59. "apparatus model...formulated in a uniform **program language** with which said functionality and said parameters of said apparatus...can be explicitly simulated" is disclosed by Banks Page 397 "many existing simulation languages" and Page 389 "C++ is an object-oriented extension to the C programming language". Also see Page 409 "YANSL" and "GPSS/H" and "SLAM" and "SIMAN" and "INSIGHT".

60. **All the remaining claims: Claims 3-5 (amended), Claim 6, Claims 7-9 (amended), Claim 10, Claim 11 (amended), Claim 12, and Claims 13-37 (new) are rejected under 35 U.S.C. 103(a) as being unpatentable.** These remaining

claims all depend from Claim 1 (directly or indirectly), and have the following

additional limitations. Please note that for each claim, only "new" limitations (not yet

discussed in prior claims) are stated.

61. **Claim 3 (twice amended):** "apparatus model...is memorized in a version permitting
use to be made of the available memory capacity in said apparatus" is disclosed by
Tucker at Page 2171 "Memory Management...The two most common strategies for
managing the available storage list are (1) first fit and (2) best fit. In the first-fit
strategy, the list of available storage is kept by increasing address....In the best-fit
strategy, the list of available storage blocks is kept in increasing order of size. When
a request for storage is mad, the smallest block that will satisfy the request is used.
As before, if the block is larger than the requested size the remaining storage is
returned to the list. When a block is returned to the heap, it is placed on the list in
order of its size".

62. The motivation to combine Tucker's "Memory Management" is to save money by
reducing the amount of memory needed in said apparatus.

63. **Claim 4 (twice amended):** "apparatus model...is **modifiable** by means of a software
program" is disclosed by Banks at Page 33 "Modeling Principle 2 The secret to being
a good modeler is the ability to remodel" and "Modeling Principle 3 The modeling
process is evolutionary because the act of modeling reveals important information
piecemeal...The modeling process continues until additional detail or information is
no longer necessary...relationships between the system under study and the model are
continually defined and redefined. Simulations of the model provide insights into the
behavior of the model, and hence the system, and lead to a further evolution of the
model."

64. The motivation to combine Banks' "modeling principle 2...[and] modeling principle
3" is to iteratively "provide insights into the behavior of the model, and hence the
system, and lead to a further evolution of the model".

65. **Claim 5 (amended):** "apparatus...**access for reading and writing** said apparatus
model...is made possible by means of a software program" is disclosed by Banks at
Page 397 "many existing simulating languages". These languages inherently must

obey Banks' Page 32-33 "Modeling Principle 1 Conceptualizing a model requires

system knowledge, engineering judgment, and model-building tools" and "Modeling

Principle 2 The secret to being a good modeler is the ability to remodel" and

"Modeling Principle 3 The modeling process is evolutionary". Thus, these

simulating languages inherently must be able to create models, write them, read them,

simulate them, modify them, write them, and so forth iteratively.

66. The motivation to combine Banks' modeling principles is to be "a good modeler".

67. **Claim 6:** "apparatus...**access authorization...configurable**" is disclosed by Tucker

at Page 1919 "Access and Authorization Models The fundamental model for access

control is the access matrix model, previously described. The modes of access that

are registered in the access matrix at any instant define the authorized accesses

between subjects and objects." Note that the access matrix can be changed or

reconfigured.

68. The motivation to combine Tucker's "access matrix" is satisfy " the three traditional

security properties: confidentiality, integrity, and availability" as stated at Tucker

Page 1919.

69. **Claim 8 (amended):** "apparatus model...is **memorizable on a data carrier** and

usable by a software program" is disclosed by Tabak at page 44 "Magnetic disks

belong to the category of secondary memory; they are very useful in information

porting from system to system".

70. The motivation to combine Tabak's "magnetic disks" is because they are "very useful

in information porting from system to system".

71. **Claim 9 (amended): "A plant including several apparatuses...connected to a**

central control unit...via a bus" is disclosed by Head at Abstract "An automated

assembly line is controlled by a computer system...The work stations are then

controlled by the computer system". The Examiner takes Official Notice that it is

well known in the art to for computer systems to be centrally controlled and to

communicate to external devices via a bus. Central control reduces costs by sharing

resources (such as memory, CPU, and possibly a human operator), and also manages

potential conflicts between peripheral devices. Further, buses are a simple and cheap

way to communicate without the expense, complexity, and possible interference of electromagnetic communications.

72. The Applicant is entitled to traverse the official notice according to MPEP § 2144.03. However, MPEP § 2144.03 further states "See also In re Boon, 439 F.2d 724, 169 USPQ 231 (CCPA 1971) (a challenge to the taking of judicial notice must contain adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice)." Specifically, In re Boon, 169 USPQ 231, 234 states "as we held in Ahlert, an applicant must be given the opportunity to challenge either the correctness of the fact asserted or the notoriety or repute of the reference cited in support of the assertion. **We did not mean to imply by this statement that a bald challenge, with nothing more, would be all that was needed".** Further note that 37 CFR § 1.671(c)(3) states "Judicial notice means official notice". Thus, a traversal by the Applicant that is merely "a bald challenge, with nothing more" will be given very little weight.

73. The motivation to combine Head's "automated assembly line...controlled by a computer system" is to cheaply and efficiently operate a complex plant.

74. **Claim 10 (original): "apparatus models...are modifiable by said central control unit...depending on the result of the simulation"** is disclosed by Banks at Page 397 "many existing simulating languages". These languages inherently must obey Banks' Page 33 "Modeling Principle 2 The secret to being a good modeler is the ability to remodel" and "Modeling Principle 3 The modeling process is evolutionary". Thus, these simulating languages inherently must be able to create models, write them, read them, simulate them, modify them, write them, and so forth iteratively. Additionally, it is inherent that modern simulating languages (such as C++) are run on computers with CPUs, or central processing units.

75. The motivation to combine Banks' modeling principles is to be "a good modeler".

76. **Claim 11 (twice amended): "simulating the operation of a plant"** is disclosed by Banks at Page 547 "In this chapter we discuss the use of computer simulation in design and operation of car and truck assembly plants as well as automotive components manufacturing plants. Most of the automotive manufacturers

worldwide…currently require that all new and modified manufacturing system designs be verified by simulation analysis before they are approved for final equipment purchases…Studies performed in the past are indicators of how useful simulation could be in the design and operation of production systems of all kinds"

77. The motivation to combine Bank's "computer simulation…operation…plant" is because it is "useful" to save tie and money by simulating before new and modified system designs are implemented.

78. **Claim 12 (original):** contains no "new" limitations.

79. **Claim 13-18 (amended) and 24-37 (amended):** contain no "new" limitations.

80. *Remarks page 15. Note that claims 12 (original), 13-18 (amended), and 24-27 (amended) are further limiting with respect to their parent claims. However note that each further limitation has already been addressed in the context of another claim. For example, Claim 12 (amended) depends from claim 11 (twice amended,) with the additional limitation "modifying said apparatus models by said central control unit as a function of the result of simulation". This additional limitation of claim 12 (amended) has already been discussed in claim 10 (amended) which depends from claim 9 (twice amended).*

81. *Thus, the additional limitations of claims 12 (original), 13-18 (amended), and 24-27 (amended) have already been addressed above in prior claims as disclosed by prior art, and the motivation for combination has also been discussed above.*

Conclusion

82. All pending claims have all been rejected against prior art. The term "data carrier" has been objected. Pages 1-49 of Tabak are provided to the Applicant in order to provide context for interpreting page 43.

FINAL OFFICE ACTION

83. THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after
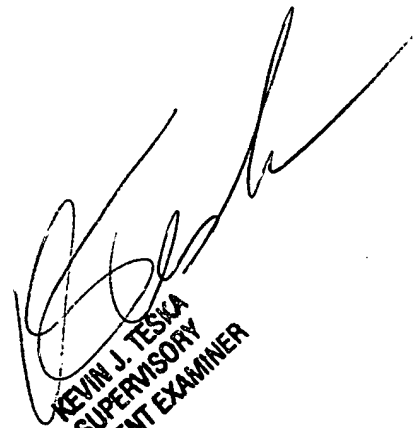
the end of the THREE-MONTH shortened statutory period, then the shortened

statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire

later than SIX MONTHS from the date of this final action.

Communication

84. Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Eduardo Garcia-Otero whose telephone number is

703-305-0857. The examiner can normally be reached on Monday through Thursday

from 9:00 AM to 7:00 PM.

85. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's

supervisor, Kevin Teska, can be reached at (703) 305-9704. The fax phone numbers

for this group are:

86. (703) 746-7238 --- for communications after a Final Rejection has been made;

87. (703) 746-7239 --- for other official communications; and

88. (703) 746-7240 --- for non-official or draft communications.

89. Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the group receptionist, whose telephone number is

(703) 305-3900.

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